

ABSTRACT OF THE DISCLOSURE

A method and apparatus for a network database in an optical network.

According to one embodiment of the invention, a wavelength division multiplexing optical network includes optical network devices interconnected by links. These optical network devices propagate along the links connectivity request messages, initiated at each of the optical network devices acting as an access node, to discover possible end to end paths that meet a set of zero or more connectivity constraints, where an end to end path is a series of two or more of the optical network devices connected by links on which a set of wavelengths is available for establishing a lightpath. In addition, the optical network devices acting as access nodes each include a database representing available paths with costs from that access node to reachable destination nodes, where each of the paths has associated with it in the database the wavelengths available on that path.